Abstract of the Disclosure

5   A real-time operating system (RTOS) for use with minimal-memory controllers has a kernel for managing task execution, including context switching, a plurality of defined tasks, individual ones of the tasks having subroutines callable in nested levels for accomplishing tasks. In the RTOS context switching is constrained to occur only at task level, and cannot

10   occur at any lower sub-routine level. This system can operate with a single call...return stack , saving memory requirement. The single stack can be implemented as either a general-purpose stack or as a hardware call...return stack. In other embodiments novel methods are taught for generating return addresses, and for using timing functions in a RTOS.

15